

## ABSTRACT

For example, because an optical position detector for positioning a head for a high-density floppy disk is constituted so that openings 111 and 112 are used in which the thickness of a returning optical path bound for photodetectors 108R and 108L from a disk 107 is larger than the thickness of an advancing optical path bound for the disk 107 from a light source 101, a light beam is not easily interrupted in the middle of an optical path even if a light beam falls due to a tilt of the disk and therefore, it is possible to stably obtain position detection signals. Moreover, by reducing the luminous energy to be returned to a light source, it is possible to obtain a signal having less noises even if the distance between object images decreases and downsize an apparatus.

In the case of a conventional optical position detector for positioning a head for a high-density floppy disk, a light beam is tilted due to a tilt of a disk and interrupted in its returning path because the numerical aperture of an optical system is small and the quality of a signal used for position detection is easily deteriorated. Moreover, when decreasing the distance between object images in order to downsize an apparatus, noises of a light source increase and the quality of a signal is deteriorated.